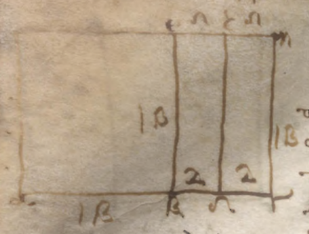


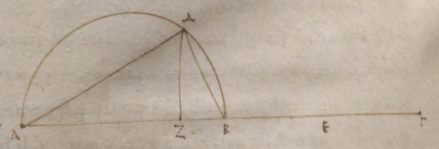
ἐν τῷ ἑξῆς πρὸς τῇ ἑξῆς
ὑπὸ τῶν βα αζ πρὸς
τὸ ὑπὸ τῶν αβ βζ λόγον
ἔχει ἢ περ τὸ δβ. διὰ τὰ αὐτὰ
τὸ ὑπὸ τῶν βα αζ πρὸς τὸ
ὑπὸ τῶν αβ βζ λόγον ἔχει ἢ περ τὸ αδ
πρὸς τὸ δβ. διὰ τὰ αὐτὰ καὶ
τὸ ὑπὸ τῶν βα αζ πρὸς τὸ
ὑπὸ τῶν αβ βζ λόγον ἔχει ἢ περ τὸ αδ
πρὸς τὸ δβ. ὡς ἄρα τὸ ὑπὸ τῶν βα αζ
πρὸς τὸ ὑπὸ τῶν αβ βζ, οὕτως τὸ αδ πρὸς τὸ δβ.

πρὸς ἀλλήλους ἐστὶν ὡς ἡ ἀπὸ τῆς αγ πρὸς τὴν ἀπὸ τῆς βγ.

τὸ ἄρα ὑπὸ τῶν βα αζ πρὸς τὸ ὑπὸ τῶν αβ βζ λόγον ἔχει ἢ περ ἡ ἀπὸ τῆς αγ πρὸς τὴν ἀπὸ τῆς βγ.

ἐν τοῖς ἑξῆς θεωρήματι δεῖξαι ὅτι τὰ ὅμοια τρίγωνα τὰ ἐπὶ τῶν ἴσων βάσεων ὄντα πρὸς ἀλλήλα ἐστὶν ὡς αἱ βάσεις πρὸς ἀλλήλας.

ἔστω τρίγωνα ὅμοια τὰ αβγ δεζ ἐπὶ ἴσων βάσεων ὄντα τῶν βγ ζε. λέγω ὅτι ἐστὶν ὡς ἡ βγ πρὸς τὴν ζε οὕτως τὸ αβγ τρίγωνον πρὸς τὸ δεζ τρίγωνον.



ἐπεζευχθείσαι γὰρ αἱ βα γα εζ ηζ καὶ διὰ τοῦ α σημείου παράλληλος ἤχθω τῇ βγ ἡ αθ καὶ διὰ τοῦ η τῇ εζ ἡ ηθ. ἴσον ἄρα ἐστὶ τὸ μὲν βγ τῷ εζ, τὸ δὲ αθ τῷ ηζ. καὶ ἐπεὶ ἐν τριγώνῳ τῷ αβγ παρὰ μίαν τῶν πλευρῶν τὴν βγ ἦκται ἡ αθ, ἔστιν ἄρα ὡς ἡ βγ πρὸς τὴν εζ οὕτως ἡ γα πρὸς τὴν εα καὶ ἡ βα πρὸς τὴν εη καὶ ἡ αθ πρὸς τὴν ηζ. ἴσον δὲ τὸ μὲν βγ τῷ εζ, τὸ δὲ αθ τῷ ηζ. ἔστιν ἄρα καὶ ἡ γα πρὸς τὴν εα καὶ ἡ βα πρὸς τὴν εη καὶ ἡ αθ πρὸς τὴν ηζ. καὶ ἐπεὶ ὡς μὲν ἡ γα πρὸς τὴν εα οὕτως ἡ βα πρὸς τὴν εη καὶ ἡ αθ πρὸς τὴν ηζ, ἔστιν δὲ καὶ ὡς μὲν ἡ γα πρὸς τὴν εα οὕτως τὸ αβγ τρίγωνον πρὸς τὸ εβγ τρίγωνον, ὡς δὲ ἡ βα πρὸς τὴν εη οὕτως τὸ εβγ τρίγωνον πρὸς τὸ εζγ τρίγωνον, ὡς δὲ ἡ αθ πρὸς τὴν ηζ οὕτως τὸ αγβ τρίγωνον πρὸς τὸ ηζβ τρίγωνον, ἔστιν ἄρα καὶ ὡς μὲν τὸ αβγ τρίγωνον πρὸς τὸ εβγ τρίγωνον οὕτως τὸ εβγ τρίγωνον πρὸς τὸ εζγ τρίγωνον, ὡς δὲ τὸ αγβ τρίγωνον πρὸς τὸ ηζβ τρίγωνον οὕτως τὸ εβγ τρίγωνον πρὸς τὸ εζγ τρίγωνον. ἐὰν δὲ ὦσιν τρία μεγέθη ἀνάλογον, ἔστιν ὡς τὸ πρῶτον πρὸς τὸ τρίτον οὕτως τὸ ἀπὸ τοῦ πρώτου πρὸς τὸ ἀπὸ τοῦ δευτέρου. καὶ ὡς ἄρα τὸ αβγ τρίγωνον πρὸς τὸ εζγ τρίγωνον οὕτως ἡ βγ πρὸς τὴν ζε. ἀλλὰ τὸ μὲν αβγ τρίγωνον πρὸς τὸ εζγ τρίγωνον ἐστὶν ὡς ἡ βγ πρὸς τὴν ζε, τὸ δὲ αβγ τρίγωνον πρὸς τὸ εβγ τρίγωνον ἐστὶν ὡς ἡ αγ πρὸς τὴν εγ. καὶ ὡς ἄρα ἡ αγ πρὸς τὴν εγ οὕτως ἡ βγ πρὸς τὴν ζε. τῶν δὲ τριγώνων καὶ παραλληλογράμμων ἀνάλογον ὄντων ἀναστρέψαντι ἔστιν ὡς ἡ γε πρὸς τὴν γα οὕτως ἡ ζε πρὸς τὴν γβ. καὶ ὡς ἄρα ἡ γε πρὸς τὴν γα οὕτως τὸ εζγ τρίγωνον πρὸς τὸ αβγ τρίγωνον. ἀλλὰ τὸ εζγ τρίγωνον πρὸς τὸ αβγ τρίγωνον ἐστὶν ὡς ἡ βγ πρὸς τὴν ζε. καὶ ὡς ἄρα ἡ βγ πρὸς τὴν ζε οὕτως τὸ αβγ τρίγωνον πρὸς τὸ εζγ τρίγωνον. ὅπερ ἔδει δεῖξαι